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IN THE CLAIMS

Please amend the claims as follows:

1.-24. (Cancelled)

25. (original) A method of probing a material under investigation comprising the steps of:

transmitting one or more ultrasound beam into the material under investigation;
receiving first echoes generated by interactions between one of the transmitted
one or more ultrasound beam and the material under investigation, the
interactions occurring at points distributed over at least a first spatial
dimension and a second spatial dimension;

generating first data from the received first echoes, the first data having values
distributed in a time dimension and additionally distributed over at least
the first or the second spatial dimension;

transforming the first data into second data having values distributed over at
least both the first and the second spatial dimension;

transmitting an other ultrasound beam into the material under investigation;
receiving further echoes generated using the other ultrasound beam;
generating third data using the received further echoes, the third data being
echolocation data and having a dimensionality; and

combining the third data with the second data, the combination having the same
dimensionality as the third data.

26. (original) The method of claim 25, wherein characteristics of the other ultrasound
beam are modified according to an algorithm that processes the second data.

27. (original) The method of claim 25, wherein the step of combining the second data and the third data improves the signal to noise ratio in a resulting image over the signal to noise ratio of a resulting image that may be generated using only the second data or only the third data.
28. (original) The method of claim 25, wherein the step of transmitting the other ultrasound beam is responsive to the second data.
29. (original) The method of claim 25, further including the step of configuring the one or more of the transmitted beam responsive to an imaging mode.
30. (original) The method of claim 25, further including a step of determining an area to be probed using the one or more ultrasound beam.
31. (original) The method of claim 25, wherein the step of transforming the first data includes using a data transform with a weighting function responsive to an identity of a main contributing element.
32. (original) The method of claim 25, wherein the second data is indexed using a coordinate system responsive to a shape of the one or more ultrasound beam.
- 33.-71. (cancelled)